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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/518,609      | 07/27/2005  | Kurt Hess            | 1867-0082           | 8991             |

7590 04/09/2007  
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Indianapolis, IN 46204-5109

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| EXAMINER |
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NGUYEN, HUNG T

|          |              |
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| ART UNIT | PAPER NUMBER |
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2612

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 04/09/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/518,609

Applicant(s)

HESS ET AL.

Examiner

HUNG T. NGUYEN

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2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The Abstract of the invention is objected. The abstract should be in narrative form and generally limited to **a single paragraph** on a separate sheet within the range of 50 to 150 words.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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3. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishikawa et al. (U.S. 6,552,664).

Regarding claims 1-4, Nishikawa discloses a fire / smoke detector (1) [ figs. 1, 5-6, col.1, lines 44-55 and col.7, lines 8-19 ] comprising:

- a housing (100) for housing / covering a modular construction of fire detector [ figs.1-2, col.3, lines 31-41 ];
- insertable detectors as smoke (1) and temperature (2), photo-diode (11) and other types of detectors coupled with a printed circuit / printed board (110) for detecting smoke density and presence of fire around the detector [ figs.1,3,6-9, col.1, lines 44-65 and col.3, lines 29-54 and col.4, lines 5-17 ];
- an optical guide (120) coupled with the printed circuit (110) to form an open bent path (122) for capturing an outside air with possible smoke particles [ figs.1-2, col.3, lines 36-48 ] ; and
- the photo-diode (11) is disposed at the other end of the path (122) to receive a diffused light from the LED (10) through a prism (124) to flow a current of varying level indicative of a smoke density in the air [ col.3, lines 41-48 ].

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-6, 8-13 & 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa et al. (U.S. 6,552,664).

Regarding claims 5-6, Nishikawa does not specifically mention details about housing constructions including hood forms access openings , bridges as claimed by applicant because those subjects are well known and the housing constructions are NOT primary subject of the invention and it is obvious design choice of the skilled artisan.

Therefore, it would have been obvious to one having ordinary skill in the art to modify the housing including hood forms access openings and bridges in the system of Nishikawa to perform the same function as desired.

Regarding claim 8 & 10-12, Nishikawa discloses the detectors as smoke (1) and temperature (2) and other types of detectors coupled with a printed circuit (110) for detecting smoke density and presence of fire around the detector [ figs.1,3,6-9, col.1, lines 44-65 and col.3, lines 29-54 and col.4, lines 5-17 ].

Regarding claims 9, 13 & 18, please see claims 5-6 above.

Regarding claims 19-20, Nishikawa discloses the detectors as smoke (1) and temperature (2) and other types of detectors coupled with a printed circuit (110) for detecting smoke density and presence of fire around the detector and gives warning

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messages in cases of high smoke density and condition of fire [ figs.1,3,6-9, col.4, lines 5-17 and lines 45-64 ].

6. Claims 7 & 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa et al. (U.S. 6,552,664) in view of Rattman et al. (U.S. 6,756,905).

Regarding claims 7 & 14, Nishikawa discloses the detectors as smoke (1) and temperature (2), photo-diode (11) and other types of detectors coupled with a printed circuit / printed board (110) for detecting smoke density and presence of fire around the detector [ figs.1,3,6-9, col.1, lines 44-65 and col.3, lines 29-54 and col.4, lines 5-17 ];

- an optical guide (120) coupled with the printed circuit (110) to form an open bent path (122) for capturing an outside air with possible smoke particles [ figs.1-2, col.3, lines 36-48 ]; and

- the photo-diode (11) is disposed at the other end of the path (122) to receive a diffused light from the LED (10) through a prism (124) to flow a current of varying level indicative of a smoke density in the air [ col.3, lines 41-48 ].

- the housing (100) for housing / covering a modular construction of fire detector [ figs.1-2, col.3, lines 31-41 ] without mention labyrinth system as claimed by applicant.

Furthermore, Rattman teaches a measuring smoke detector chamber (30) including labyrinth system (38) extending generally around the entire side wall for ingress and egress of smoke particles, a top and bottom [ abstract, col.8, lines 31-46 and col.9, lines 12-16 ].

Therefore, it would have been obvious to one having ordinary skill in the art to have the teaching of Rattman in the system of Nishikawa for measuring the smoke detection chamber & providing numerous clear paths for passage of smoke particles into and out of the smoke detection chamber.

Regarding claims 15-16, Nishikawa & Rattman do not specifically mention details about housing constructions including multiple connectors, a multi plug as claimed by applicant because those subjects are well known and the housing constructions are NOT primary subject of the invention and it is obvious design choice of the skilled artisan.

Regarding claim 17, Nishikawa discloses the detectors as smoke (1) and temperature (2) and other types of detectors coupled with a printed circuit (110) for detecting smoke density and presence of fire around the detector and gives warning messages in cases of high smoke density and condition of fire [ figs.1,3,6-9, col.4, lines 5-17 and lines 45-64 ].

### **Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Morisue (U.S. 4,168,438).
- Bernal et al. (U.S. 5,546,074).
- Nigashima (U.S. 5,670,947).
- Winterble et al. (U.S. 5,751,218).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung T. Nguyen whose telephone number is (571) 272-2982. The examiner can normally be reached on Monday to Friday from 9:00 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass, Jeffrey can be reached on (571) 272-2981. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

**HUNG NGUYEN**  
**PRIMARY EXAMINER**



Examiner: Hung T. Nguyen

Date: April 01, 2007